

USPTO Serial No.: 10/671,842

Brookshire *et al.*

Response to Non-Compliant Amendment dated March 1, 2006

**Amendment to the Claims:**

1. (Currently amended) A diamond, comprising:

a pavilion having a plurality of facets disposed from a girdle to a culet, each of the plurality of facets having a continuous flat surface extending from the girdle to the culet, wherein an edge of a first adjoining facet contacts an edge of a second adjoining facet along a common radial boundary; and

a dome-shaped crown disposed above the girdle, wherein the girdle extends no further than a widest circumference of the dome-shaped crown and the pavilion extends no further than a widest circumference of the girdle, the dome-shaped crown has formed from a plurality of sets of facets with an equal number of facets in each set, and the sets of facets cut with monotonically decreasing angles to form a stepped contour from the girdle to an apex of the dome-shaped crown, each of the sets of facets having monotonically decreasing surface areas from the girdle to the apex of the dome-shaped crown.

2. (Cancelled)

3. (Original) The diamond of claim 2, wherein the plurality of facets of the pavilion are each cut to an angle of about 40.75 degrees.

4. (Original) The diamond of claim 1, wherein the plurality of facets of the pavilion totals at least sixteen in number.

5. (Original) The diamond of claim 1, wherein the pavilion is substantially conical in shape.

6. (Withdrawn) The diamond of claim 1, wherein the apex of the crown includes a star-shaped top-center facet.

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USPTO Serial No.: 10/671,842

Brookshire *et al.*

Response to Non-Compliant Amendment dated March 1, 2006

7. (Original) The diamond of claim 1, further including:  
a first set of facets disposed in the crown adjacent to the girdle and cut about 90 degrees with respect to a reference line which is tangential to the apex of the dome-shaped crown; and  
a second set of facets disposed in the crown adjacent to the first set of facets and cut about 75 degrees with respect to the reference line.
8. (Currently amended) The diamond of claim 7, further including:  
a third set of facets disposed in the crown adjacent to the second set of facets and cut about 65 degrees with respect to the reference line;  
a fourth set of facets disposed in the crown adjacent to the third set of facets and cut about 55 degrees with respect to the reference line; and  
a fifth set of facets disposed in the crown adjacent to the fourth set of facets and cut about 45 degrees with respect to the reference line; and  
~~a sixth set of facets disposed in the crown adjacent to the fifth set of facets and cut about 35 degrees with respect to the reference line.~~
9. (Cancelled)
10. (Currently amended) The diamond of claim 7, further including:  
a third set of facets disposed in the crown adjacent to the second set of facets and cut about 65 degrees with respect to the reference line;  
a fourth set of facets disposed in the crown adjacent to the third set of facets and cut about 56 degrees with respect to the reference line; and  
a fifth set of facets disposed in the crown adjacent to the fourth set of facets and cut about 46 degrees with respect to the reference line; and  
~~a sixth set of facets disposed in the crown adjacent to the fifth set of facets and cut about 38 degrees with respect to the reference line.~~
11. (Cancelled)

USPTO Serial No.: 10/671,842

Brookshire *et al.*

Response to Non-Compliant Amendment dated March 1, 2006

12. (Withdrawn) The diamond of claim 1, wherein ones of the facets disposed in the dome-shaped crown are rectangular.

13. (Original) A cut gemstone, comprising:

a pavilion extending from a girdle to a culet, wherein the girdle extends no further than a widest circumference of the crown and the pavilion extends no further than a widest circumference of the girdle; and

a crown in the form of a symmetrical hemisphere having a first set of facets disposed above the girdle and a second set of facets disposed between the first set of facets and an apex of the crown, wherein the first set of facets is cut at a first angle with respect to a reference line which is tangential to the apex of the crown and the second set of facets is cut at a second angle with respect to the reference line which is less than the first angle, each of the sets of facets having an equal number of facets.

14. (Original) The cut gemstone of claim 13, wherein each of the plurality of facets of the pavilion are symmetrically disposed and extend continuous from the girdle to the culet.

15. (Original) The cut gemstone of claim 14 wherein each of the plurality of facets of the pavilion are cut to an angle of about 40.75 degrees with respect to the reference line.

16. (Original) The cut gemstone of claim 13, wherein the plurality of facets of the pavilion totals at least sixteen in number.

17. (Withdrawn) The cut gemstone of claim 13, wherein the apex of the crown includes a star-shaped facet.

18. (Original) The cut gemstone of claim 13, wherein the first set of facets is disposed in the crown adjacent to the girdle and cut about 90 degrees with respect to the reference line and the second set of facets is disposed in the crown adjacent to the first set of facets and cut about 75 degrees with respect to the reference line.

QBPHX\1996600.1

USPTO Serial No.: 10/671,842

Brookshire *et al.*

Response to Non-Compliant Amendment dated March 1, 2006

19. (Currently amended) The cut gemstone of claim 18, further including:  
a third set of facets disposed in the crown adjacent to the second set of facets and cut about 65 degrees with respect to the reference line;  
a fourth set of facets disposed in the crown adjacent to the third set of facets and cut about 55 degrees with respect to the reference line; and  
a fifth set of facets disposed in the crown adjacent to the fourth set of facets and cut about 45 degrees with respect to the reference line; and  
~~a sixth set of facets disposed in the crown adjacent to the fifth set of facets and cut about 35 degrees with respect to the reference line.~~
20. (Cancelled)
21. (Currently amended) The cut gemstone of claim 1, further including:  
a third set of facets disposed in the crown adjacent to the second set of facets and cut about 65 degrees with respect to the reference line;  
a fourth set of facets disposed in the crown adjacent to the third set of facets and cut about 56 degrees with respect to the reference line; and  
a fifth set of facets disposed in the crown adjacent to the fourth set of facets and cut about 46 degrees with respect to the reference line; and  
~~a sixth set of facets disposed in the crown adjacent to the fifth set of facets and cut about 38 degrees with respect to the reference line.~~
22. (Cancelled)
23. (Currently amended) A cut gemstone, comprising:  
a pavilion having a plurality of facets disposed from a girdle to a culet; and  
a dome-shaped crown disposed above the girdle, wherein the girdle extends no further than a widest circumference of the dome-shaped crown and the pavilion extends no further than a widest circumference of the girdle, the dome-shaped crown has formed from a plurality of sets of facets with an equal number of facets in each set, the dome-shaped crown has a stepped

QBPHX\1996600.1

USPTO Serial No.: 10/671,842

Brookshire *et al.*

Response to Non-Compliant Amendment dated March 1, 2006

contour from the girdle to an apex of the dome-shaped crown.

24. (Original) The cut gemstone of claim 23, wherein each of the plurality of facets of the pavilion are symmetrically disposed and extend continuous from the girdle to the culet.

25. (Original) The cut gemstone of claim 24, wherein the plurality of facets of the pavilion are each cut to an angle of about 40.75 degrees with respect to the reference line which is tangential to the apex of the dome-shaped crown.

26. (Withdrawn) The cut gemstone of claim 23, wherein the apex of the dome-shaped crown includes a star-shaped facet.

27. (Original) The cut gemstone of claim 23, further including:  
a first set of facets disposed in the crown adjacent to the girdle and cut about 90 degrees with respect to a reference line which is tangential to the apex of the dome-shaped crown; and  
a second set of facets disposed in the crown adjacent to the first set of facets and cut about 75 degrees with respect to the reference line.

28. (Currently amended) The cut gemstone of claim 27, further including:  
a third set of facets disposed in the crown adjacent to the second set of facets and cut about 65 degrees with respect to the reference line;  
a fourth set of facets disposed in the crown adjacent to the third set of facets and cut about 55 degrees with respect to the reference line; and  
a fifth set of facets disposed in the crown adjacent to the fourth set of facets and cut about 45 degrees with respect to the reference line, and  
~~a sixth set of facets disposed in the crown adjacent to the fifth set of facets and cut about 35 degrees with respect to the reference line.~~

29. (Cancelled)

QBPIX\1996600.1

USPTO Serial No.: 10/671,842

Brookshire *et al.*

Response to Non-Compliant Amendment dated March 1, 2006

30. (Currently amended) The cut gemstone of claim 27, further including:  
a third set of facets disposed in the crown adjacent to the second set of facets and cut about 65 degrees with respect to the reference line;  
a fourth set of facets disposed in the crown adjacent to the third set of facets and cut about 56 degrees with respect to the reference line; and  
a fifth set of facets disposed in the crown adjacent to the fourth set of facets and cut about 46 degrees with respect to the reference line; and  
~~a sixth set of facets disposed in the crown adjacent to the fifth set of facets and cut about 38 degrees with respect to the reference line.~~
31. (Cancelled)
32. (Withdrawn) A method of cutting a gemstone, comprising:  
forming a plurality of facets on a pavilion from a girdle to a culet; and  
forming a dome-shaped crown above the girdle.
33. (Withdrawn) The method of claim 32, wherein the dome-shaped crown has a stepped contour from the girdle to an apex of the dome-shaped crown.
34. (Withdrawn) The method of claim 33, wherein the plurality of facets of the pavilion are each cut to an angle of about 40.75 degrees with respect to a reference line which is tangential to the apex of the dome-shaped crown.
35. (Withdrawn) The method of claim 33, further including:  
forming a first set of facets in the crown adjacent to the girdle cut at an angle about 90 degrees with respect to a reference line which is tangential to the apex of the dome-shaped crown; and  
forming a second set of facets in the crown adjacent to the first set of facets cut about 75 degrees with respect to the reference line.

USPTO Serial No.: 10/671,842

Brookshire *et al.*

Response to Non-Compliant Amendment dated March 1, 2006

36. (Withdrawn) The cut gemstone of claim 35, further including:  
forming a third set of facets in the crown adjacent to the second set of facets cut about 65 degrees with respect to the reference line;  
forming a fourth set of facets in the crown adjacent to the third set of facets cut about 55 degrees with respect to the reference line;  
forming a fifth set of facets in the crown adjacent to the fourth set of facets cut about 45 degrees with respect to the reference line; and  
forming a sixth set of facets in the crown adjacent to the fifth set of facets cut about 35 degrees with respect to the reference line.
37. (Withdrawn) The cut gemstone of claim 36, further including:  
forming a seventh set of facets in the crown adjacent to the sixth set of facets cut about 30 degrees with respect to the reference line;  
forming an eighth set of facets in the crown adjacent to the seventh set of facets cut about 25 degrees with respect to the reference line;  
forming a ninth set of facets in the crown adjacent to the eighth set of facets cut about 20 degrees with respect to the reference line;  
forming a tenth set of facets in the crown adjacent to the ninth set of facets cut about 15 degrees with respect to the reference line; and  
forming an eleventh set of facets in the crown adjacent to the tenth set of facets cut about 10 degrees with respect to the reference line.
38. (Withdrawn) The cut gemstone of claim 35, further including:  
forming a third set of facets in the crown adjacent to the second set of facets cut about 65 degrees with respect to the reference line;  
forming a fourth set of facets in the crown adjacent to the third set of facets cut about 56 degrees with respect to the reference line;  
forming a fifth set of facets in the crown adjacent to the fourth set of facets cut about 46 degrees with respect to the reference line; and

USPTO Serial No.: 10/671,842

Brookshire *et al.*

Response to Non-Compliant Amendment dated March 1, 2006

forming a sixth set of facets in the crown adjacent to the fifth set of facets cut about 38 degrees with respect to the reference line.

39. (Withdrawn) The cut gemstone of claim 38, further including:

forming a seventh set of facets in the crown adjacent to the sixth set of facets cut about 34 degrees with respect to the reference line;

forming an eighth set of facets in the crown adjacent to the seventh set of facets cut about 30 degrees with respect to the reference line;

forming a ninth set of facets in the crown adjacent to the eighth set of facets cut about 25 degrees with respect to the reference line;

forming a tenth set of facets in the crown adjacent to the ninth set of facets cut about 19 degrees with respect to the reference line; and

forming an eleventh set of facets in the crown adjacent to the tenth set of facets cut about 15 degrees with respect to the reference line.